

June 2011

**Protocol
for
Incidental Take Authorization**

Northern Blue Butterfly (*Lycaeides idas nabokovi*)

Note

If carrying out a given protocol is not feasible, or multiple listed species in a given management area pose conflicts, contact the Bureau of Endangered Resources at 608/264-6057. Staff in BER will work with Integrated Science Services (Research) staff, species experts and managers to establish an acceptable protocol for a given site that will allow for incidental take without further legal Consultation or public notice

I. Species Background Information

A. Status

State status: Endangered.

USFWS Region 3 species of management concern? No

Number of known sites in Wisconsin: Occurs in a few sites in the northeastern part of the state in pine/oak barrens habitat in Florence, Forest, Marinette and Oconto Counties. Historically, the species was recorded from Menominee County as well, and may still inhabit that area.

Global Range: The northern blue is found in boreal Eurasia and across Canada from Alaska to Newfoundland. The range dips into the alpine areas of the western United States and in appropriate habitat in the northern Midwest. At least six subspecies have been identified in the United States.

B. Habitat

Larval Host plants: From Minnesota to Nova Scotia the larvae feed on plants of the Ericaceae, the blueberry family. In Wisconsin the host plant has been identified as *Vaccinium caespitosum*, dwarf bilberry, a state-endangered plant species.

General Habitat Description: The butterfly is found only near dwarf bilberry. The host

June 2011

plant occurs in small patches beneath scattered pine on deep, sandy soil in association with bracken, sweet fern, barrens strawberry, and other blueberries. Openings in pine/oak forest or barrens habitat with scattered pines in northeastern Wisconsin may be found to support the rarely encountered host plant. The butterflies have been observed nectaring on dogbane, yarrow, hawkweed, and clover.

Critical habitat features: Presence of dwarf bilberry and nectar sources.

C. Life History

Number of generations per year: One.

Over-wintering stage: Egg.

Over-wintering location: On stems or in debris below the plants.

Adult Flight Period: In Wisconsin, adults are active between mid-June and late July. The butterflies have been most often observed during the first two weeks of July.

Single Season Dispersal Ability: Unknown.

Egg location: Eggs are laid singly on stems or below the bilberry plants.

Larval location: Larvae are present on the plants from hatching in May until pupation.

Pupation location: Unknown. Pupation often occurs in ant nests in Europe.

II. Management Protocol For Authorized Incidental Take

If the management activity is for the purpose of recovering, maintaining or improving the grassland, prairie or barrens ecosystem that includes habitat for the Northern blue, then given the rarity of this species, the Bureau of Endangered Resources (BER) should be contacted at 608/264-6057. Staff in BER will work with managers and species experts to determine the best course of action for a given site.

The butterfly population level and the portions of the management area that are critical to avoid jeopardizing the recovery of the species should be determined, and depending on the circumstances at the given site, incidental take may be allowed under the following conditions:

- A. **Burning:**** Fire may be used on some portion of the habitat with the remaining dwarf bilberry bushes protected to avoid damage to eggs and larvae.

June 2011

- B. Mowing:** May be used to reduce competition from other vegetation in dwarf bilberry patches.
- C. Selective Brush/Tree-cutting:** May be used if cutting of encroaching brush and saplings occurs when the ground is covered with at least 6" snow and the host plants are well marked to reduce crushing and, if trees can be removed from the site without disturbance to the bilberry plants; that is, trees can be directed to fall away from the site, skidding does not occur in the opening, and vehicles are routed to the cutting area without passing through the site.
- D. Herbicide Use:** Herbicides may be used for spot treatment of woody growth.

Survey Protocol

For Presence / Absence Surveys for Northern Blue:

June 2011

Personnel conducting the surveys must be knowledgeable in Wisconsin blue butterfly identification.

Survey period: Adult flight season as indicated above. Observations of immatures are not acceptable for verification of northern blue presence. Note: the presence of ants and/or caterpillars observed on plants are indicators of possible butterfly use.

Weather conditions: Survey above 60 degrees F. Do not survey during rain or high winds.

Time of day: Survey between 8:00 AM and 6:00 PM. Avoid surveying during midday when temperatures are above 90 degrees F.

Number of site visits: Survey twice during peak flight for two consecutive seasons.

Survey method: Search dwarf bilberry plants and nectar sources in the surrounding vicinity for butterflies. Include trails and roadways to look for puddling or patrolling males. Survey at least 20 minutes per acre of habitat.

June 2011

Definitions

Definition of “Site” for Northern Blue:

The area supporting dwarf bilberry and nectar plants including access roads and trails.